

REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Propriety of Making Official Action Final

Withdrawal of the finality of the Official Action is respectfully requested on the grounds that the **amendments** to claim 1 did **not necessitate** the application of **entirely new references** to claims 7 and 26-27, or the new rejection of claims 1-6, 8-17, and 28-33.

Claims 7 and 26-27, which were not amended, are rejected under newly cited references. The amendments to claim 1, which simply added that the metal layer formed on the base has a bottom in contact with the base, certainly did not necessitate the application of the newly cited references, none of which has anything to do with the bottom of a metal layer being in contact with the base on which it is formed.

Furthermore, the new rejection of claim 1 was clearly not the result of the addition of the “bottom in contact” limitation since the new rejection actually deleted rather than added a reference. It is not logical that adding a limitation could have necessitated the deletion of a reference.

Because the claim amendments did not necessitate the application of newly cited references or the new rejections, withdrawal of the finality of the last Official Action is respectfully requested.

2. Interview

The Examiner was contacted before the initial due date for response in an attempt to schedule an interview. The request for an interview was denied on the grounds that the latest Official Action is a final Office Action. However, the Examiner indicated that an interview would be considered should the present response not result in allowance of the application.

3. Rejection of Claims 1-6, 8-17, 25, and 28-33 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,811,920 (Wada) and 4,982,134 (Aono)

This rejection is respectfully traversed on the grounds that the Examiner has misinterpreted element 13a of Wada as corresponding to the claimed metal film, and element 11a as corresponding to the claimed base (see page 3, second complete paragraph of Official Action), and that neither the Wada patent nor the Aono patent discloses or suggests, whether considered individually or in any reasonable combination, an electron tube in which a metal film is **formed on** a base and the bottom of a metal film contacts the base, and in which a linear member is secured to the metal film by **welding an additional member thereto**, as recited in claim 1.

Claim 1 specifically recites:

- *“at least one metal film formed on a base,”*
- *“said at least one linear member is connected to said at least one metal film by welding said at least one additional member to said at least one metal film,”* and
- *“a bottom of the portion of said at least one metal film being in direct contact with the base.*

While the linear member 2a of Wada might be secured to element 13a by additional member 12a, member 13a is not a metal film formed on “base” 11a, much less one formed on the base in such a manner that the bottom of the film is in direct contact with the base. Instead, member 13a is a cantilevered extension of an L-shaped member of which elements 13a and 11a are integral parts. Element 13a cannot reasonably be considered a metal film formed on element 11a, and the bottom of element 13a is not in contact with the base 11a.

Furthermore, there is no suggestion that the “additional member” 12a of Wada, to which the linear member 2a is secured, is welded to element 13a. Even if element 13a could be interpreted as a metal film on a base, the Wada patent states that “securing portion” 12a of spacer frame 5 is “formed at the leading end of the connection portion 13a” (col. 4, lines 4-7 of the Wada patent). Cathode 2a is secured to the securing portion 12a by welding, but there is no suggestion of securing portion 12a to portion 13a by welding, as opposed to simply “forming”

portion 12a on portion 13a. **Forming portion 12a at the end of portion 13a is not the same as welding portion 12a to 13a, with the linear member 2a held in between.**

According to the claimed invention, a metal film is formed on the base, and a linear member is connected to the metal film by welding an additional member to the metal film. This is a much simpler structure than, and avoids the problems of, the structure disclosed in the Wada patent. As pointed out in the previous response, the electrode structure of Wada, which consists of a cathode attaching plate 4a, a first support member 3a secured to the cathode-attaching member, and the spacer frames 5 which consist of base portion 11a, **a substantially L-shape connection portion 13a “stood erect from the base portion 11a”** (col. 4, lines 3-4), and a **securing portion 12 “formed at the leading end of the connection portion 13a,”** suffers from the same defects as the prior art, namely that the connection portion has:

- a complicated shape (compare Fig. 1B of the present application with prior art Fig. 16B and 3a of Wada—notice the close resemblance between the arrangements of Fig. 16B and Fig. 3a of Wada,
- is costly to manufacture,
- requires a large area, and
- is difficult to assemble.

Because (i) the L-shape connection portion 13a of Wada is not “formed on” the base 11a in the manner that the claimed metal layer is formed on the base, with the bottom of the connection portion being “in contact” with the base; (ii) the securing portion 12a of Wada is not welded to the connection portion 13a in the manner that the claimed additional member is welded to the metal film (as opposed to the linear member 2a of Wada being welded to the securing portion 12a); and (iii) these differences result in the claimed invention having a number of advantages relative to the structure of Wada, it is respectfully submitted that the Wada patent could not have suggested the claimed base/metal layer/linear member/additional member arrangement.

These deficiencies of the Wada patent are not made-up for by the Aono patent, which discloses a structure in which the linear member 11 is secured to a spring 18 extending from the frame of a back electrode. Accordingly, withdrawal of the rejection of claims 1-6, 8-17, 25, and 28-33 is respectfully requested.

4. Rejection of Claim 7 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,811,920 (Wada), 4,982,134 (Aono), and 5,834,892 (Kikuchi)

This rejection is respectfully traversed on the grounds that the Kikuchi patent, like the Wada and Aono patents, fails to disclose or suggest, whether considered individually or in combination with any of the other references of record, the claimed metal film formed on a base, and linear member connected to the metal film by welding an additional member to the metal film (as opposed to welding of the linear member to the additional member).

Instead, the Kikuchi patent discloses a fluorescent display tube in which the cathodes are fixed by “anchors” of different heights. There is no suggestion that the anchors include a metal film formed on a base in the manner claimed, or of welding an additional member to the metal film in order to secure the cathodes, as also claimed. Accordingly, withdrawal of the rejection of claim 7 under 35 USC §103(a) is respectfully requested.

4. Rejection of Claims 26 and 27 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,811,920 (Wada), 4,982,134 (Aono), and 5,621,284 (Shichao)

This rejection is respectfully traversed on the grounds that the Shichao patent, like the Wada and Aono patents, fails to disclose or suggest, whether considered individually or in combination with any of the other references of record, the claimed metal film formed on a base, and linear member connected to the metal film by welding an additional member to the metal film.

Instead, the Shichao patent disclose cathode filaments secured to a circuit board by springs 204 and leads 205, and “supported by side walls 211 and spacers.” Again, there is no

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suggestion of the claimed metal film, base, or additional member, and therefore withdrawal of the rejection of claims 26 and 27 under 35 USC §103(a) is respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC

A handwritten signature in black ink, appearing to read 'B. Urcia', with a long horizontal line extending to the right.

By: BENJAMIN E. URCIA
Registration No. 33,805

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BACON & THOMAS, PLLC
625 Slaters Lane, 4th Floor
Alexandria, Virginia 22314

Telephone: (703) 683-0500

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